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A New Echinoid from the Ocala Limestone

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ECHINOIDS are a very important part of the fauna of the Late Eocene Ocala limestone in peninsular Florida. They are the most distinctive single element of the macrofauna and are useful in differentiating the members. One of the more common of the many genera found in this Late Eocene deposit is *Eupatagus*, a spatangoid genus represented by a large number of species, both extinct and extant, throughout the world. During investigation of the morphologic variation in the species of *Eupatagus* from the Ocala limestone in peninsular Florida, one specimen was examined that differs from any described species from Florida or the Caribbean. This specimen is here recognized as the type of a new species.

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Eupatagus ingens n. sp.

Type. The holotype is deposited in the Florida State Museum Invertebrate Fossil Collection, Florida State Museum, Gainesville, Florida. Catalog No. 1008. No paratypes.

Locality and Collector. Roof of Maple Sugar Cave, about 10

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miles south of Lecanto, Citrus County, Florida. Collected by Dennis Finch, 1966.

Geologic Horizon. Ocala limestone, Jackson Stage, Late Eocene.

Description. Test large; horizontal outline elongated oval, posteriorly and postero-laterally truncated. Test highest a third of the distance between the apical system and periproct, posterior



Fig. 1. *Eupatagus ingens* n. sp. Aboral view, $\times 1$. (Photograph prepared by Dr. H. K. Brooks.)

portion of test high, anterior portion low. Adoral surface flat; margin relatively sharp. Apical system slightly excentric anteriorly; details of system not visible, but probably ethmolytic. Anterior ambulacrum non-petaloid, narrow, depressed into a distinct, but narrow, furrow; petals long, extending nearly to margin, wide, flush, ob lanceolate, widest near ends; pores oval, conjugate; poriferous zones much narrower than interporiferous zones. Peristome located in anterior third of test, reniform, wider than long, apparently lipped. Periproct terminal, slightly inclined posteriorly, overhanging slightly; shape unknown due to damage. Peripetalous fasciole visible only on anterior portion of test, narrow, probably unindented. Tubercles rather small, apparently randomly positioned. Labrum and sternal plates in contact; labrum missing but seems to have extended halfway between the peristome and periproct.

Length of type 123; width 104; height at apical system 50; height at greatest point 54 mm.

The type is worn aborally, and tubercles, fascioles, plate sutures, and pore details are indistinct; much of the adoral surface is destroyed, including the trivium, foscelle, and labrum.

Comparisons. *Eupatagus ingens* is distinct from those species included in the subgenus *Gymnopatagus* by Cooke (1959), represented in Florida by *E. (G.) antillarum* (Cotteau, 1875) and *E. (G.) ocalanus* Cooke, 1942. This group is characterized by medium-sized species with orderly rows of tubercles and narrow petals, whose interporiferous zones are only about three times as wide as the poriferous zones. It seems to be more closely related to the unnamed group containing large species with more-or-less randomly arranged tubercles and wide petals, whose interporiferous zones can be more than seven times as wide as the poriferous zones. *E. ingens* appears to be closely related to *E. clevei* (Cotteau, 1875), distinguished from it by over 30 mm greater length; ob lanceolate, not evenly rounded, petals; an anterior furrow; and a relatively long, not short and small, labrum. It also appears to be closely related to *E. venturillae* Sánchez Roig, 1951, distinguished from this species by the anterior furrow; ob lanceolate and angular, not evenly rounded, petals; and greater size (the type of *E. ingens* is 25 mm longer than Sánchez Roig's largest specimen of *E. venturillae*).

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